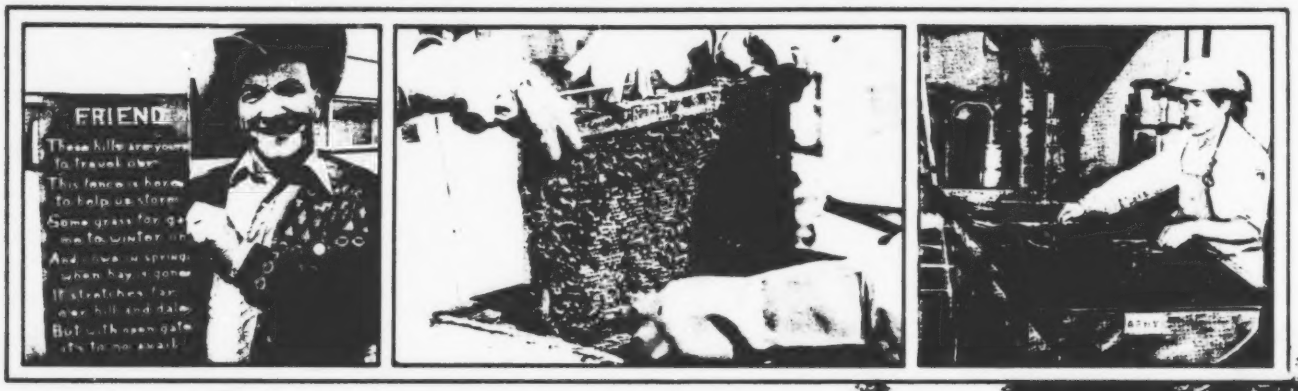
# ARDSA
# PROGRESS REPORT #3




## CANADA - BRITISH COLUMBIA AGRICULTURE AND RURAL DEVELOPMENT SUBSIDIARY AGREEMENT

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Agriculture Canada

Canada

Province of British Columbia
Ministry of Agriculture and Food

# MESSAGE FROM THE ARDSA CO-CHAIRMEN

It is with pleasure that we present the third progress report of the British Columbia Agriculture and Rural Development Subsidiary Agreement (ARDSA).

This report comes as ARDSA completes its sixth year of activity in British Columbia and as the agreement comes to a close. From August 1, 1980 to July 31, 1983, the period this report covers, ARDSA committed almost $25 million towards agricultural planning and implementation projects. Since the beginning of the agreement on August 1, 1977, more than $58.5 million have been committed.

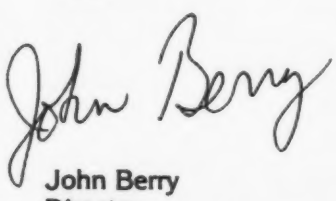
As the agreement draws to a close, more emphasis in Part I (Research, Planning, Training and Market Promotion) has been put on studies that will indicate future directions for the B.C. agriculture and food industry.

Awareness and interest has continued to spread among the province's ranchers as the results of Part II's Co-ordinated Resource Management Plans continue to make a positive impact on range productivity.

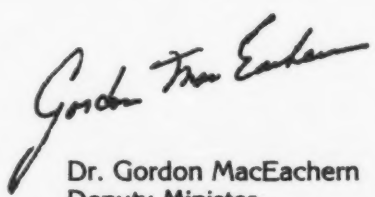
There has been an overall increase in applications for Part III (Primary Resource Development) projects due to the success of previous projects. Two main dyking projects, four studies and many drainage and irrigation projects are improving existing farmland and opening up new land to agricultural production.

Part IV (Support Services and Community Development) has continued to assist the food processing industry in B.C. Many owners and managers across the province have indicated that without ARDSA funding, their projects and plans would not have been possible.

Through a concerted effort in many areas — research, planning, training and marketing promotion, wide implementation and use of co-ordinated resource management plans, land improvement and attention given to support services and rural community development — the British Columbia agriculture and food industry is improving an already viable position in the marketplace. ARDSA's agriculture assistance programs are committed to encouraging that development.



John Berry
Director
Agriculture and Food
Development (B.C.)
Regional Development Branch
Agriculture Canada
(Federal Co-Chairman)



Dr. Gordon MacEachern
Deputy Minister
British Columbia Ministry
of Agriculture and Food
(Provincial Co-Chairman)

# INTRODUCTION

## Background

In 1974, the governments of Canada and British Columbia signed a General Development Agreement (GDA) to improve opportunities for productive employment in B.C. and to promote balanced development in the province. As part of GDA, the Agriculture and Rural Development Subsidiary Agreement (ARDSA) was signed in July, 1977, between the federal Department of Regional Economic Expansion (DREE) and the B.C. Ministry of Agriculture and Food. As a result of reorganization within federal departments, the federal funding responsibility was transferred from DREE to Agriculture Canada in 1982.

The agreement was to have expired in July, 1982, but was extended for one year to utilize more fully funds provided under it.

Because the approved agreement period, including extension, expired July 31, 1983, no new projects were approved after that date. Work on approved projects will continue until the end of October, 1984.

## Sixth Year Completed

During the six years of ARDSA, $58.5 million has been injected into a total of 402 ARDSA projects (see Table 1).

This project report, the third of the Agriculture and Rural Development Subsidiary Agreement, focuses primarily on the funding of the 133 projects approved from August 1, 1980 to July 31, 1983. The previously published first two progress reports contain information on funds and projects approved from August 1, 1977 to July 31, 1980.

Because of the large number of projects assisted by ARDSA since 1980, not all have been described in this report. However, highlights from a representative selection of projects have been included to give a picture of how ARDSA funds have been put to use over the past three years.

**TABLE 1**
**Total Approved Expenditures**
August 1, 1977 to July 31, 1983

| | Number of Projects | Total Approved Costs | ARDSA Approved Contribution | Local Share |
|---|---|---|---|---|
| **Part I - Research, planning, training and market promotion** | 67 | $5 858 939 | $5 119 187 | $739 752 |
| **Part II - Co-ordinated resource management** | 133 | 20 005 095 | 18 010 648 | 1 994 447 |
| **Part III - Primary resource development** | 48 | 28 448 684 | 20 209 924 | 8 238 760 |
| **Part IV - Support services and community development** | 154 | 65 533 692 | 15 162 529 | 50 371 163 |
| **TOTAL** | 402 | $119 846 410 | $58 502 288 | $61 344 122 |

**Note:** All expenditure tables contained in this report show approved expenditures from August 1, 1977, the beginning of the agreement, to July 31, 1983. Because of overlapping costs on many projects, the figures for the last three years (August 1, 1980 to July 31, 1983) cannot easily be isolated from the six year total.

# PART I

*Left* A new approach to leaf roll and fan leaf virus detection being taken by Dr. Paul Monette could result in imported grapevines being released from quarantine more quickly. *Right* An ultra-low freezer with temperatures down to -80 degrees celsius is used to expose X-Ray film of treated grapevine samples in a process known as auto-radiography. *Main Photo* Researchers at Vernon inspect a bee hive as part of a program to select and produce improved honeybee stock more suited to British Columbia's climate.

# RESEARCH, PLANNING, TRAINING AND MARKET PROMOTION

Part I projects address the need to identify, plan and research opportunities in the industry. During the 36 month period from August 1, 1980 to July 31, 1983, 17 new projects were approved, bringing the six year project total to 67. ARDSA's contribution over that time now stands at $5 119 187 (see Table 2).

## SECTION i
## APPLIED RESEARCH, STUDIES, MARKET DEVELOPMENT AND PILOT DEMONSTRATIONS

The projects in this section are designed to identify and support opportunities for employment within the agriculture and food sectors.

Nine new projects were approved and four projects continued. Highlights of some of the projects follow.

### B.C. Honeybee Stock Improvement

The B.C. Honey Producers' Association and the B.C. Ministry of Agriculture and Food are working together in Vernon and Powell River to select and produce an improved honeybee stock better adapted to B.C. winters. Researchers seek improved honey production, more populous post-winter hives and lower consumption of stored honey by bees over winter.

Project staff are also becoming adept in queen and package bee production. They are doing particularly well in producing early queens in colder climates (as compared to California's climate). In addition, the project is providing breeder queens from the improved stock, as well as training, to bee keepers across the province.

### Accelerated Grape Virus Detection and Eradication

Under the B.C. Grapegrowers' propagation program, many different grapevines are brought into the province and planted to discover which ones are most suitable to B.C.'s climate and growing conditions. All imported grapevines, however, must first be quarantined to check for diseases, particularly leaf roll and fan leaf viruses, both of which reduce yield. Present virus tests require a long quarantine — up to three years.

A study project under the direction of Dr. Paul Monette, Agriculture Canada Research and Plant Quarantine Station, Sidney, is testing the effectiveness of new and faster detection methods for leaf roll and fan leaf virus. If successful, the new tests will allow imported grapevines to be released from quarantine faster. The tests involve adding radio-active $C_{14}$ amino acids to the tissue culture medium of the grapevine. Any virally infected cells in the plant will incorporate the radioactive chemical, which can be detected through X-ray film techniques.

The project is also testing the effectiveness of virus suppressant drugs being used for virus eradication.

### Sheep and Lamb Study

Responding to a request from the B.C. Sheep and Wool Commission, ARDSA funded a study to identify the marketing opportunities and constraints for the sheep and lamb industry in British Columbia.

The researchers' main conclusion was that the best long-term potential for the province's sheep industry lies in increased lamb production. The present volume of close to 600 000 kilograms per year, the study indicates, could be increased to 1.1 million

*Photo* The best long-term potential for British Columbia's sheep industry lies in increased lamb production.

kilograms if production were to be increased by 31 000 lambs per year. Marketing these production levels would require an orderly development of the sheep industry.

The study puts forward several recommendations for development, among them a call for greater productivity and improved management practices to reduce production costs, and increasing production capacity by attracting more full-time commercial sheep producers.

### Virus-Free Seed Potatoes

A project in Pemberton helped improve the production methods used in developing virus-free seed potatoes. Demonstrations of new techniques showed growers how to handle and transplant stem-cutting mother plants developed from disease-free tissue culture. Mother plants are traditionally grown directly from tubers.

The new tissue-culture techniques improved the stem-cutting quality. Project results are helping growers produce the highest quality seed potatoes possible so they can compete on domestic and international markets.

### Reduced Pesticide Spraying

The results of a project to develop and improve integrated pest management programs are expected to reduce the cost and environmental impact of insecticide and fungicide spraying on farms in the Lower Mainland.

Under the direction of Dr. Bob Vernon, Entomologist at the Agriculture Canada Research Station in Vancouver, the project is focussing on improved detection and control of the insect and disease pests of onions, carrots and potatoes in B.C. — so that sprays need only be applied when the insects are actually present.

Results are expected to be reduced cost to the grower, reduced farmworker and environmental hazards, and a more appealing and saleable crop to pesticide-conscious consumers.

### Water Control Experiments

Farmland in the Fraser Valley receives very high precipitation in winter. However, crop moisture requirements peak in July, the month with lowest precipitation.

At a Boundary Bay Airport test site, a project is underway to control the amount of moisture available in the soil on a year-round basis. In winter, a series of underdrains carries excess water away from the site. In the summer, water is pumped back to maintain or raise the water table. Results from the four test plots on the site are determined by measuring crop response under conditions simulating as much as possible those found on a working farm.

The project, which is expected to give results for many years, will generate data for larger scale drainage and irrigation projects. In the Fraser Valley alone, there are at least 50 000 hectares which could benefit from this data.

## SECTION ii
## AGRICULTURAL PLANNING

Planning is an integral part of the agricultural industry in British Columbia. Four planning projects were initiated during the 36 months covered by this report.

## SECTION iii
## PROJECT FEASIBILITY AND EVALUATION

Before some projects were approved for funding by another section of ARDSA, a project feasibility study was carried out to gather more information. In other cases, project evaluations were done during or upon completion of the project.

*Photo* Early test plot results at Boundary Bay Airport indicate significantly increased crop yield, due to strict control over the amount of moisture available to the plot throughout the year.

Three major studies have been completed by private consultants since the last report. One is highlighted below.

## ARDSA Evaluation Phase II

The Phase II Evaluation of the ARDSA program assessed the effectiveness of the program in meeting its stated goals and objectives within the context of the provincial agri-food industry. Through evaluation and balanced appraisal of programs currently in place, government is better able to meet the challenges facing the agriculture and food industry in the future.

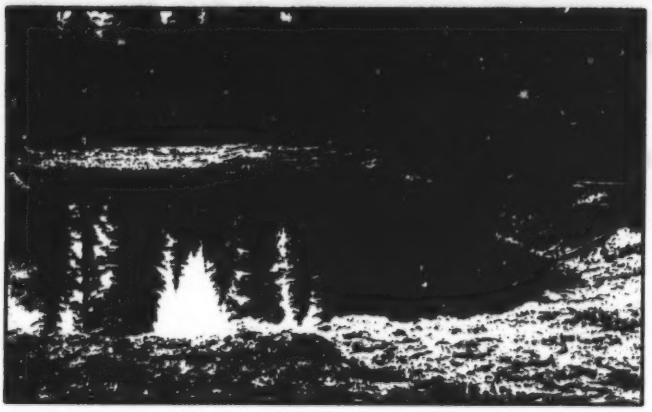
The study concluded that by funding a diverse range of projects in a variety of agriculture and geographical areas, ARDSA has attempted to strengthen and develop B.C.'s agricultural sector, thus contributing to the important GDA objective of diversification in B.C.'s economy. In addition, ARDSA has made a significant effort to introduce those services, infrastructures and capital improvements which should eventually improve the ability of existing industries to sustain growth.

The study also concluded that ARDSA helped identify opportunities and improvements which could ultimately lead to better employment opportunities.

**TABLE 2**
**PART I — Approved Expenditures**
August 1, 1977 to July 31, 1983

| | Number of Projects | Total Approved Costs | ARDSA Approved Contribution | Local Share |
|---|---|---|---|---|
| i. Applied research, studies, etc. | 37 | $3 521 095 | $2 811 343 | $709 752 |
| ii. Agricultural planning | 13 | 529 392 | 499 392 | 30 000 |
| iii. Project feasibility and evaluation | 14 | 1 216 730 | 1 216 730 | — |
| iv. Training projects | 3 | 591 722 | 591 722 | — |
| TOTAL | 67 | $5 858 939 | $5 119 187 | $739 752 |

# PART II



**Under Co-ordinated Resource Management Plans, Crown land is shared by several different user groups at the same time. *Left* Ranching is one example; wildlife, forestry, mining and recreation interests are also commonly involved. *Right and Main Photo* Cattle movement on the range can be controlled by management tools such as watering holes, cattle guards and fences.**

# CO-ORDINATED RESOURCE MANAGEMENT PLANNING

Co-ordinated Resource Management Planning is designed to increase the grazing capacity of Crown range and help stabilize the beef industry by taking full advantage of available resources, in harmony with all other users.

Program applicants were restricted to groups of ranchers and other range users operating on Crown range within the broadly defined geographical areas of the Kootenay, Thompson-Okanagan, Cariboo-Chilcotin, Bulkley Valley, Prince George and Peace River areas of the province.

From August, 1980 to July, 1983, 53 projects were approved. The six year total now stands at 133 approved projects. The ARDSA contribution totals $18 004 585 (see Table 3).

## The Process

Traditionally, when different users were on the same piece of Crown land and competing for the same resources, severe conflicts and problems frequently arose. In the mid-70's, Co-ordinated Resource Management Planning (CRMP), a resource management system, was introduced to provide a forum for planning, discussion, understanding and compromise among the users. By planning together and taking into account the complex interactions among various users, now individual resource users and government agencies can reduce the possibility of conflicts and raise the level of benefits to all participating users.

Primary resource users and government agencies initially meet under CRMP guidelines to determine a management strategy for the particular piece of Crown land in which they all have an interest. The needs of each user are identified and the capacity of the land base to satisfy all projected uses is determined.

The result of the planning process is a CRMP agreed to by all participants. It is a long term plan for resource use which considers the needs of present and potential users of the natural resources, the land's capacity to produce the desired products and the interactions among the projected users.

## ARDSA CRMP Objectives

ARDSA has endeavored to meet two objectives through its financial assistance for rangelands:

1. Increase forage production on B.C.'s Crown ranges as part of the overall provincial strategy for improving the B.C. beef industry. (Crown range supplies 60 per cent of the grazing land for the province's beef herd. Increases in total forage production will be necessary to support the increased livestock numbers projected for the future.)

2. Provide implementation funds for plans developing from the CRMP process. (ARDSA's range improvement funds have been directed primarily towards enhancing livestock production in CRMP areas. Occasionally, other expenditures have been justified on the basis of calculated returns to uses other than livestock production.)

## CRMPs at Work

ARDSA has assisted 133 CRMPs and Community Pastures since 1977. Funding assistance is directed at areas selected on the basis of their increased beef production potential.

Often these areas have been overgrazed for years and need extensive restoration work. By constructing cattle guards, fences, watering holes and access trails, ranchers can control cattle movement and keep their animals off overused range so that it has a chance to restore itself. Brush clearing and seeding help open up new lands and eventually allow for increased beef production on the land.

There are some areas in the province in which the present range conditions will be unable to support existing herd sizes for much longer. In these cases, ARDSA funds were used to improve the range to halt any further declines in carrying capacity.

The five year projected increase (in Animal Unit Months - AUMs) of grazing on ARDSA-funded CRMPs may reach 65 per cent in some areas. In the absence of co-ordinated planning, the projected decrease in AUMs on the same CRMPs averages 15 per cent over five years.

## Community Pastures

There are 16 community pastures in B.C. Most

are in northern regions where there has been little or no Crown range grazing in the past. Projected increases here are considerably higher due to an emphasis on new pasture development.

Community pastures are similar to CRMPs in that they do much of the same type of development work on Crown land — breaking new land, seeding, fencing and controlled burning. In fact, the CRMP concept grew out of the community pasture idea and work on multiple resource use planning in Oregon in the early 1970s.

However, community pastures generally involve many more ranchers — up to 50 or more, as compared to four or five on a CRMP — and the management is much more intensive and structured. The ranchers who share a community pasture participate in their own management association, duly constituted and registered under the Societies Act of British Columbia. As such, they take responsibility for management control on the pasture and usually all required development work as well.

There are two key components to the successful management of a community pasture. First, a management and development plan that provides the needed forage under conditions and costs that the members can afford is required. Second, the membership must be committed to making it work co-operatively. Each member must consider the pasture part of his farming operation.

Sunset Community Pasture near Dawson Creek, for example,serves the summer forage needs of 44 member ranchers in a cost-competitive manner. The pasture has 15 000 hectares of native grassland and 1500 hectares of improved land. In the past it has been able to support up to 16 000 AUMs (4000 cattle for four months of grazing). ARDSA assisted with much of the funding necessary to improve those 1500 hectares, and is now assisting with the upgrading of another 1500 hectares. Upon completion, it is expected that the pasture will be able to involve close to 50 ranchers and support 20 000 AUMs.

There are 15 other community pastures in the province, most of them in the north where there has been slower development of the cattle industry due to lack of pasture land and the high cost of developing cleared land for pasture. Community pastures are primarily designed to provide a summer forage base in an off-farm format for mixed farming areas. They tend to be oriented towards livestock use, whereas CRMPs take a more multi-use approach.

It has taken 20 years of development and the injection of adequate capital funds to get community pastures to the stage of self-sufficiency many of them have now attained.

### What the Ranchers Say

Approximately 750 ranchers are involved in the 133 ARDSA-funded plans throughout the province (see Table 3). These CRMPs and community pastures cover 3.5 million hectares, which is about 41 per cent of the usable provincial Crown range grazing reserve.

Most ranchers involved in these plans recognize their value. Problems arise, but the process is available to deal with them.

Art Devick is a fourth-generation rancher just north of Heffley Creek. He appreciates the direct contact the CRMP allows.

**Art Devick:** *"We talk more now if a problem arises."*

"If a fence is down and cattle are getting out, we don't have to go to the Forest Service. Instead we talk straight to a timber company and tell them our problem. Their timber manager will tell us a year or two in advance where they're going to cut so we can adjust our rotations.

"We talk more now with each other if a problem arises. Usually just over the phone is all it takes."

Wilson Clifton of Keremeos was one of the first ranchers to participate in a CRMP in the

**Wilson Clifton:** *"We were able to prove you can have cattle and wildlife in the same area."*

Similkameen. Now he's involved in two plans and he agrees that the CRMP process has improved communication and brought co-operation a long way.

"This is the first time we've been able to talk. Before, individuals went ahead and did what they wanted. Now we sit down and we ask, does it benefit the area and what changes have to be made? We can do that as long as we have a plan.

"We haven't had to give up an awful lot — we're just able to work together on the problems."

The co-operation and discussion have paid off in terms of production.

"In one area, cattle had been taken off the land because of wildlife management decisions. We got into the co-ordinated plan and it was agreed that cattle could go back if we made improvements like drift fences and watering troughs. So we did. We were able to prove you can have cattle and wildlife in the same area."

## Results

Co-ordinated Resource Management Plans are based on long term resource development, so it may be some years before the full benefit of the improvements implemented under the plan is recognized. However, positive results are already evident on Crown lands which were among the first to be put under a CRMP. Increases in feed production for livestock and wildlife are occuring, projected decreases have been prevented, and the general range condition tends to show signs of gradual improvement wherever a CRMP is implemented.

Rancher Wilson Clifton perhaps best sums up the impact a CRMP can have.

"Years ago they used to turn the cattle loose at the bottom of the mountain and as soon as they could get up through the snow, they'd be on top in the alpine country and overgraze it. In the fall, they'd head back down into the lower areas and eat them out, too.

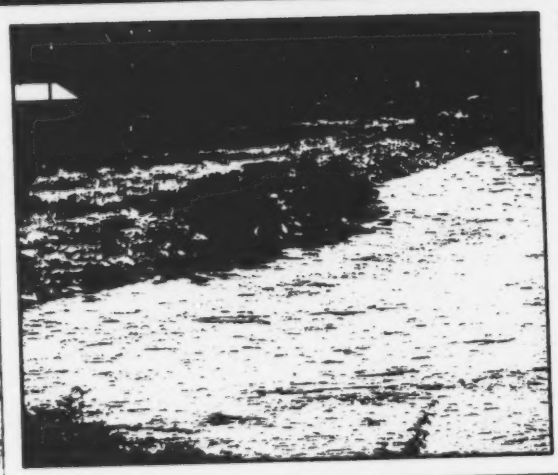
"Now we've got six different pastures and rotational grazing. We're running almost the same number of cattle that were in there originally and still leaving six inch stubble in each pasture when we pull out."

In all these planning activities, it can never be forgotten that the condition of the rangeland is central to everything else. In that light, perhaps the most important development to come out of the CRMPs is the new spirit of co-operation that is starting to become a way of life among users of Crown lands — the ranchers, loggers, hunters, government agencies and recreationalists. They are recognizing that effective resource management is best accomplished by all parties working together instead of individually thwarting each others' efforts. As CRMPs become more established, so should the spirit of co-operation. From that, users of Crown land can only benefit.

## TABLE 3
## PART II — Approved Expenditures by Region
August 1, 1977 to July 31, 1983

| | Number of Projects | Total Approved Costs | ARDSA Approved Contribution | Local Share |
|---|---|---|---|---|
| **Prince George** | 27 | $5 710 836 | $5 139 752 | $571 084 |
| **Cariboo** | 24 | 4 297 820 | 3 868 038 | 429 782 |
| **Kamloops** | 42 | 6 826 043 | 6 143 439 | 682 604 |
| **Nelson** | 34 | 2 492 166 | 2 242 949 | 249 217 |
| **Vancouver** | 1 | 49 074 | 44 166 | 4 908 |
| **Prince Rupert** | 1 | 98 475 | 88 628 | 9 847 |
| **Technical Support** | 4 | 530 681 | 477 613 | 53 068 |
| **TOTAL** | 133 | $20 005 095 | $18 004 585 | $2 000 510 |

# PART II



*Upper Left* Banks subject to erosion on the Similkameen River have been reinforced as part of a flood control project near Keremeos. *Upper Right* A new irrigation system will supply water for corn silage production near Oliver. *Lower* ARDSA has assisted irrigation projects throughout British Columbia. *Main Photo* An extensive ditch system will drain 492 hectares of agricultural land east of Chilliwack.

# PRIMARY RESOURCE DEVELOPMENT

Under Part III, 35 new projects were approved between August 1, 1980 and July 31, 1983. This brings the six year total of Part III to 56 projects. ARDSA's contribution to these projects totals $20 209 924 (see Table 4).

Four studies were conducted, funded 75 per cent by ARDSA and 25 per cent by local sources. Two main dyking projects, one at Pemberton and one on the Similkameen near Keremeos, drew close to completion. Overall, there was an increase in Part III applications, due in part to the success of earlier projects.

## SECTION i
## IRRIGATION

ARDSA assistance was available to irrigation system construction projects in which the returns of the system were forecast to exceed the total costs of the project.

Fourteen new irrigation projects were assisted. Five are highlighted below.

### Expanded Irrigation Near Vernon

Expanded irrigation works east of Vernon are supplying water to an additional 245 hectares of farmland. Pressurized pipelines and pumping systems were built to supply water from the existing Vernon Irrigation District main line to nine farmers in the Lavington and Coldstream Ranch areas.

The irrigation is increasing the yields of existing crops and has allowed new land to be brought into production.

### Laluwissin and McGillivray Creeks

Additional water storage and improved distribution works have improved the reliability of an existing irrigation system on three farms north of Lytton. A new dam was built and existing flumes were replaced with pipeline. The upgraded system will increase the amount of irrigated land, used primarily for alfalfa production and grazing.

### North Thompson Indian Band

A project to supply irrigation water to parcels of land on the North Thompson Indian Reserve near Barriere has been completed. The water will eventually be delivered to a total area of 202 hectares by means of irrigation lines and a pumping system. Most of the land is controlled by individual band members.

### Irrigation near Oliver

An irrigation system being constructed near Oliver will soon assist grape, onion and tomato production on three new parcels of farmland totalling 54 hectares. The project includes construction of a reservoir and 1000 metres of pipeline.

### Water Supply Improved

An improved water supply system for the 160 farms in the Pitt Meadows-Pitt Polder area is nearing completion. Many of the trunk mains in Pitt Meadows are being upgraded, while Pitt Polder is being connected to the Greater Vancouver Water District network.

Previously much of the pipe network serving Pitt Meadows was undersized, a situation which resulted in inadequate water pressures. The municipality was thus forced to refuse new water applications. Prior to the improvement, Pitt Polder was being supplied with water from Goose Lake by an outdated and inadequate system.

About 2400 hectares are involved.

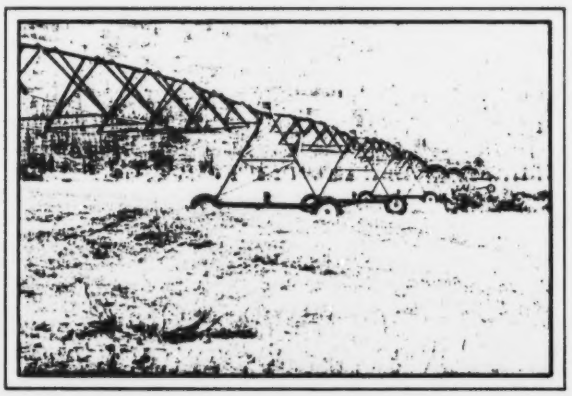


*Photo* The ARDSA-assisted irrigation system near Oliver is serving more than 300 hectares, the largest corn silage site in B.C.

## SECTION ii
## DRAINAGE

Section ii helped fund construction of drainage outlets in poorly-drained farming areas, enabling producers to install on-farm drainage systems and thus increase production. Fourteen new drainage projects were assisted.

The demand for drainage project assistance in-

creased during 1980 - 83 due to the phasing out of the Fraser River Flood Control Program and also because of the benefits being demonstrated by completed projects.

Highlights of five new drainage projects follow.

### Increased Agricultural Production in Surrey

New ditch drainage and irrigation is increasing vegetable and pasture production on the Nicomekl floodplain in Surrey. Runoff water and rainfall have traditionally collected on the floodplain, making vegetable and pasture production precarious. Water run off from the higher land adjacent to the floodplain has become more rapid recently due to urbanization.

The project included expanding the capacity of existing ditches, building a new pumphouse and installing larger capacity pumps to permit close control of water levels on the floodplain during the growing season.

### Improved Drainage and Irrigation in Delta

Drainage and irrigation improvements in the North Crescent Slough area in the District of Delta have increased yields of corn silage and dairy forage and brought new land into production over a 526 hectare area.

During the project a pump station and floodbox were constructed and drainage ditches and culverts improved. Irrigation water can now be supplied during summer when the water table is at its lowest level.

### Dyking Project near Keremeos

Dykes along the Lower Similkameen River near Keremeos will eventually protect 728 hectares of farmland from periodic flooding. The affected areas are part of the Similkameen Indian Band lands. Flooding and potential crop damage have held back development of the land, which has the potential to grow high value crops.

The project is taking three years to complete.

### Increased Crop Production in Pitt Meadows

Construction of three new pumping stations and upgrading of the existing ditch and culvert system has provided more efficient drainage in Pitt Meadows. Of the 1250 hectares affected by the project, 900 were considered poorly drained prior to the improvements.

The new pumping stations have increased the water discharge capacity by 225 per cent. Ditches were deepened and widened and culverts deepened or replaced to accommodate the additional capacity.

Provisions have also been made for backflow of irrigation water through the floodboxes where required in summer months.

### East Chilliwack Drainage Project

When completed, the East Chilliwack Drainage Project will improve drainage for 1200 hectares of land in the predominantly dairying area east of Chilliwack. A network of ditches will help eliminate severe flooding caused by winter rains, allowing greater and better quality yields.

## SECTION iii
## GENERAL IRRIGATION AND DRAINAGE

Areas not having enough participants to form a Water Improvement District could obtain ARDSA funds for small co-operative irrigation and drainage projects. Seven new projects were approved, four of which are described below.

### Irrigation

Raising the Farleigh Lake Dam near Penticton has enabled local farmers to irrigate 11 hectares of new land for hay and vegetable crops. Previously installed distribution pipelines had the capacity to supply irrigation water to the land, but until the dam was raised, the source of supply was inadequate.

*Photo* ARDSA funds assisted in raising the level of Farleigh Lake Dam near Penticton to increase the supply of irrigation water to local farmers.

## Drainage

Grindrod area farmers are benefitting from the improved drainage of 22 hectares of low-lying land, previously of limited use because of poor meltwater drainage each spring. The project has alleviated the problem through installation of collection sumps, sub-surface drainage pipes and a small electrically-driven drainage pump. The system operates during the spring.

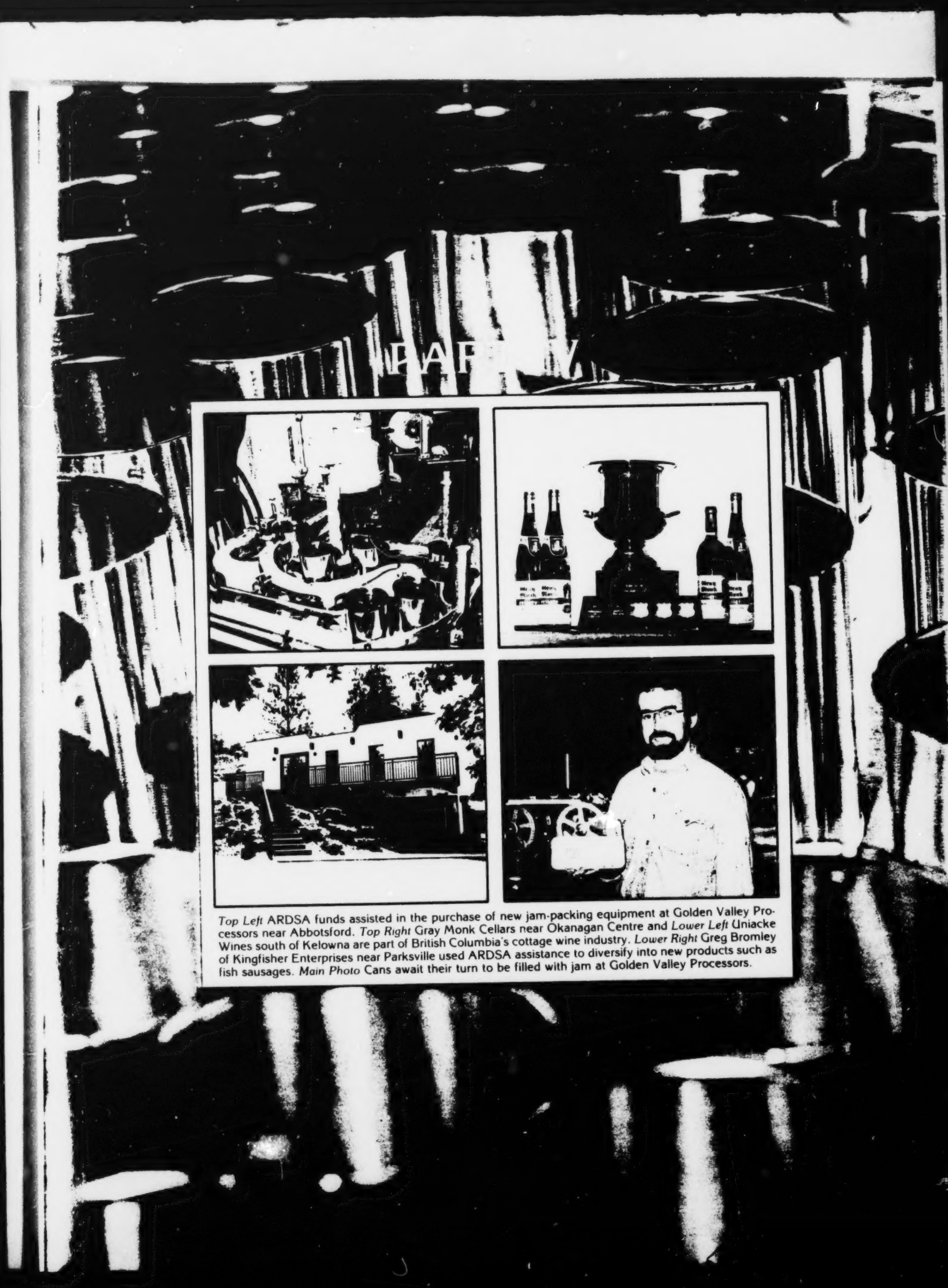
Near Abbotsford, improved drainage has helped four farms increase their production. Previously, 13 hectares were regularly inundated by the Sumas River and crop production was disrupted on an additional 20 hectares. Corn silage and grass forage is now successfully being grown on the drained land.

Construction of a new ditch outlet and a silting pond, and improvement of shallow ditches along the lower portion of Rumble Creek near Salmon Arm, will soon increase drainage on 15 hectares of agricultural land. The improvements will increase the hay crop for two farmers and one landowner.

**TABLE 4**
**PART III — Approved Expenditures**
August 1, 1977 - July 31, 1983

| | Number of Projects | Total Approved Costs | ARDSA Approved Contribution | Local Share |
|---|---|---|---|---|
| **i. Irrigation** | 30 | $10 490 017 | $6 740 174 | $3 749 843 |
| **ii. Drainage** | 15 | 17 326 667 | 12 995 750 | 4 330 917 |
| **iii. General irrigation and drainage** | 3* | 632 000 | 474 000 | 158 000 |
| **TOTAL** | 48 | $28 448 684 | $20 209 924 | $8 238 760 |

*In this section, several major projects included a number of smaller sub-projects. Projects and sub-projects totalled 10.

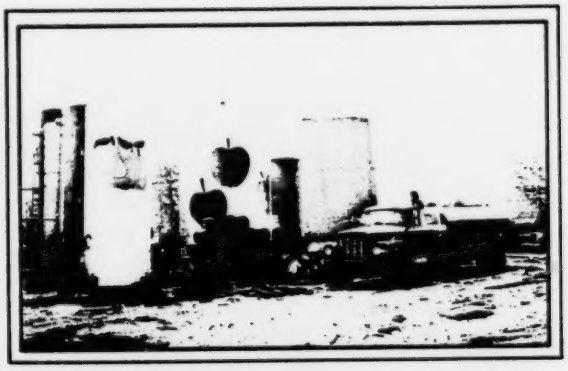


*Top Left* ARDSA funds assisted in the purchase of new jam-packing equipment at Golden Valley Processors near Abbotsford. *Top Right* Gray Monk Cellars near Okanagan Centre and *Lower Left* Uniacke Wines south of Kelowna are part of British Columbia's cottage wine industry. *Lower Right* Greg Bromley of Kingfisher Enterprises near Parksville used ARDSA assistance to diversify into new products such as fish sausages. *Main Photo* Cans await their turn to be filled with jam at Golden Valley Processors.

# SUPPORT SERVICES AND COMMUNITY DEVELOPMENT

Part IV of ARDSA provided assistance for those secondary food processing and support services which would create opportunities for rural employment and help improve agricultural stability.

During the reporting period from August 1, 1980 to July 31, 1983, 37 new projects were approved under Part IV. The six year total now stands at 154 approved projects. The ARDSA commitment totals $15 162 529 (see Table 5).



## SECTION i
## SERVICES TO ENCOURAGE PRIMARY PRODUCTION

Eligible projects were required to stimulate primary agricultural production and to involve local people. Six new projects were approved between August, 1980 and July 1983, three of which are described below.

### Improving the Oyster Supply

Oyster growers on the British Columbia coast will soon have an improved supply of oyster seed. Innovative Aquaculture Products Limited is constructing a full production hatchery at Skerry Bay on Lasqueti Island.

An artificial seed-producing process will supplement collection of natural oyster seed during spawning. Removing the uncertainty of seed supply from natural sources will help ensure an annual harvest. It is considered an essential service and may replace altogether the natural collection of oyster seed at Pendrell and Hotham Sounds.

### Waste Oil Marketing

The Axis Oil Corporation is processing used motor oil at its refinery in Winfield for use in the Okanagan tree fruit industry.

ARDSA assisted in upgrading the already existing plant so that it could produce the winter dormant oil used to spray fruit trees. Waste oil is collected from logging firms and major transportation companies and treated chemically for use by commercial orchards.

The refinery is aiming to produce 532 000 litres of dormant oil per year, a quantity expected to impart considerable savings to the fruit industry.

## SECTION ii
## RURAL DEVELOPMENT

ARDSA funds were committed to four new projects which will make rural communities more attractive for agricultural development.

Projects were eligible for assistance if they were going to provide market access roads, electrical services to remote rural areas, or develop water supplies for production or market facilities.

Two of the approved projects are now bringing electrical power to 12 farms in North Prespatou and South Buick, near Dawson Creek. Grain crops are the main agricultural commodities of the region, although there is also limited forage and beef production.

The single phase power extensions are expected to increase the flexibility and stability of the farms included in the projects. As a result, farmers are now installing and developing electric grain dryers, stock watering equipment, yard and barn lighting and heated maternity areas for livestock.

*Photo* Axis Oil Corporation near Winfield produces winter dormant oil for Okanagan orchards.

## SECTION iii
## PROCESSING AND VALUE-ADDED OPERATIONS

Funding assistance was given to 26 new projects that established, modernized or expanded value-added processing operations in rural communities. The eligible projects included facilities which enhance the value of food production, such as packing and grading, and operations involved in the secondary processing of food products.

Highlights of six approved projects follow.

### Pharmaceutical Extraction Plant

ARDSA funds are assisting Brookside Farms Ltd. in building a modern pharmaceutical extraction plant at Abbotsford.

The plant will use B.C.-developed technology to extract lecithin and lysozyme from egg whites without damaging the protein content of the eggs.

In addition, the plant will use an improved extraction process to produce D.N.A (deoxyribonucleic acid) from salmon milt, until now a waste product.

All three products will be exported to pharmaceutical companies in Japan and Europe.

### Two New Estate Wineries

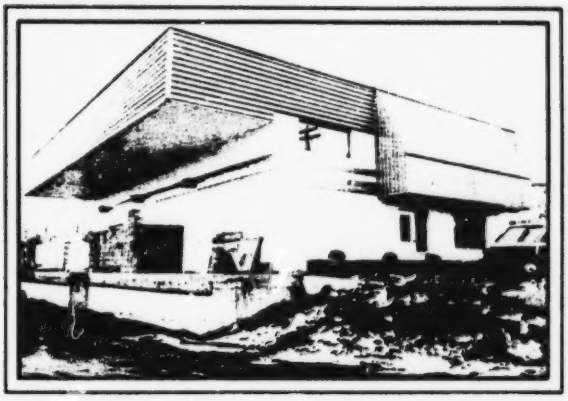
Gray Monk Cellars of Okanagan Centre, just north of Kelowna and Uniacke Wines in the Okanagan Mission area just south of Kelowna, have begun production of premium vinifera wines.

The wineries are utilizing grapes from their own area. Marketing is done via tasting room sales at the wineries, specialty liquor stores and through restaurants. The estate wines are offered as a premium alternative to expensive imports.

ARDSA assisted with the funding of buildings and machinery at both wineries. Seven new jobs have been created.

### New Dairy for Kamloops

The Blackwell Dairy Farm at Barnhartvale near Kamloops was assisted by ARDSA in the construction of a milk processing plant on the existing farm. The dairy is now supplying the Kamloops area with fresh dairy products from local sources.



At present, the dairy is processing 2000 litres of milk produced each day on the Blackwell farm. As markets grow, the B.C. Milk Board may assign processed milk to the dairy for resale.

### Expanded Jam Packing

Golden Valley Processors of Abbotsford have recently constructed new facilities and upgraded their processing and canning equipment to meet increased demands for their jam products.

ARDSA funds assisted with construction of the new building and the jam-making equipment, including a labelling machine, boiler and fruit melting equipment.

Golden Valley is filling the gap left by the closure of other jam companies in British Columbia. Its market extends east to Manitoba.

### New Packing Facilities

ARDSA funds helped the Western Greenhouse Growers Co-op in Surrey build a new packinghouse for its hothouse tomato and long English cucumber business. The new facilities were included as part of an overall upgrading program aimed at getting the best possible product to the consumer.

## SECTION iv
## RURAL EMPLOYMENT

Projects under Section iv created jobs in remote rural communities where high seasonal unemployment is common but not accommodated under existing government assistance programs.

*Photo* The Blackwell Dairy Farm near Barnhartvale supplies the Kamloops area with local fresh dairy products.

More than 100 summer jobs for cone collectors in rural areas throughout B.C. were created when Reid-Collins Nurseries relocated its Richmond forest seed extraction plant to a new site in Aldergrove. ARDSA assisted in funding the plant, which has an improved cone drying and seed extraction capacity.

The nursery can now provide seed extraction services to domestic companies producing genetically-controlled trees. Extraction for this market was not possible in the old plant due to outdated machinery.

Reid-Collins markets its forestry seed throughout the world, with the majority of sales to Northern Europe.

## SECTION v
## PUBLIC INFORMATION

This section covers the development of material used to inform potential applicants and the general public about the ARDSA program.

ARDSA regularly issued news capsules to the press and agricultural community. It also arranged for signs and plaques to be erected at project sites. Slide presentations were available explaining the program. Progress reports outlined expenditures and some of the approved projects.

**TABLE 5**
**PART IV — Approved Expenditures**
August 1, 1977 to July 31, 1983

| | Number of Projects | Total Approved Costs | ARDSA Approved Contribution | Local Share |
|---|---|---|---|---|
| **i. Services to encourage primary production** | 25 | $5 714 743 | $1 335 913 | $4 378 830 |
| **ii. Rural development (Hydro, access roads, etc.)** | 48 | 9 567 029 | 3 358 565 | 6 208 464 |
| **iii. Processing and value-added operations** | 76 | 48 884 177 | 9 764 385 | 39 119 792 |
| **iv. Rural employment** | 4 | 1 042 743 | 378 666 | 664 077 |
| **v. Public information** | 1 | 325 000 | 325 000 | — |
| **TOTAL** | 154 | $65 533 692 | $15 162 529 | $50 371 163 |

For more information, contact:
(note that the program expired July 31, 1983)

**Director, Agriculture and Food Development (B.C.) or:**

**Manager, Program Implementation**
Agriculture and Food Development (B.C.)
Regional Development Branch
Agriculture Canada
1016 Johnson Street Victoria, B.C. V8V 3N7
**Phone: 388-0245**

**ARDA Branch Director**
ARDA Branch
B.C. Ministry of Agriculture and Food
Legislative Buildings, Victoria, B.C. V8V 1X4
**Phone 387-5121, local 216**

**ARDA Development Officer**
B.C. Ministry of Agriculture and Food
4607 - 23 St., Vernon, B.C. V1T 4K7
**Phone: 545-1387**

# ARDSA

# PROGRESS REPORT #3

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